2: Stirling--108 [3] (1930-1931) 1938 Jivaro
116, 222

"While fruits are rather extensively used for food purposes. Among those occurring most abundantly in the region of the Santiago are guava beans, sapotes, and the fruit of the chonta palm."

25. Vigna --44 [5]
116, 231, 222, 462

(no date) 1945

Jivaro

The Jibaro women breed domestic birds, hogs, little monkeys, parrots, and even wild birds, with astonishing skill. They do not keep fruit or products of the earth in their house which is always painstakingly clean, but every day they go to the garden to obtain the necessities for the day.

28: Tessman--350 [6] (No date) 1930 Jivaro
116, 222, 262

Palm-cabbage is eaten, and so are the fruits of Oenocarpus bataua (ungŭki), of Mauritia flexuosa (átsō), and of Euterpe (sakŏ). The larvae of palmer-worms (mŭndiš) and a certain ant (uĕk) are eaten. The Indians eat honey, too.

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season,[1] and a diversified crop inventory all contribute to making a continual supply of agricultural products possible throughout the year.

Crops grown for their tubers or corms include, besides sweet manioc, two varieties of sweet potato, *papa china* (from Spanish) [taro?], and three other members of the Araceae family (*sapa, nuka, wanchup*), the carrot-like *maya* (arracacha?), and peanuts. Of these, manioc is grown in by far the largest quantity, and is the chief source of starch. The most important non-tuberous food plants are plantains and "white" maize. Other crops grown in relatively small quantities are squash, red peppers, tomatoes, onions, the "gold" banana (*guineo de oro* in Spanish), pineapple, papaya, sugar cane, tobacco, achiote, gourds, cotton. *Tsapay* (for heavy cordage), various fish poisons, medicinal plants, and hallucinogenic drugs, especially *Banisteriopsis* species and *Datura arborea*, are both cultivated in the garden and collected wild in the forest.

Gardens are abandoned after three plantings of manioc, in other words, after about three to five years, because of the growing amount of labor required to clear the ever increasing numbers of weeds. New garden clearings are made nearby in virgin timber except when the actual household is being moved, in which case the gardens are planted at the new house location. This practice of shifting gardens, the so-called "slash-and-burn" or swidden technique, is made possible by the plentiful supply of land. The Jivaro recognize this method, despite the necessity of making new clearings, as involving less effort than attempting to cope with the weeds at the old site.

If a man clears the forest without the aid of neighbors, he tends to make small clearings at different times, while the rarer communal effort results in one large clearing. Whether

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279 and plantains around it. She supports the basket with a tumpline
462 over the forehead, carries an empty cooking pot in her right
512 hand, a firebrand in her left hand, and the axe under her arm.
313 Leaving the children in the house, she sets forth down the trail with her husband, who carries only his gun and his machete.
[482] When they arrive at the spot where trees are to be felled, she fetches wood, makes a fire, and cooks manioc. Her husband starts felling trees. After about two hours he calls for beer. He drinks two or three gourd bowls full and continues working. In about another hour he calls for beer again and drinks a similar
[252] amount. He tells his wife to cook meat and continues working. Around noon he goes to where she has been cooking, and asks
[252] for beer, drinking three gourd bowls full. She serves boiled
[262] meat, putting it, with boiled manioc and roasted plantains, on fresh banana leaves. When they finish eating, he drinks beer again, and returns to his work. He fells trees for about an hour, comes back and drinks more beer.

Then they return home. When they arrive, he sits down on his
[606] stool and asks for beer. At about 2 P.M., his daughter and son-in-law, who live a few hundred yards away, drop by and join in
[535] drinking beer. They all begin to social-dance and, since there is ample beer brewed, they continue drinking and dancing all afternoon and late into the night. They drink beer continually
[262] and do not bother to prepare or eat any food. The children
[855] drink beer, too, and munch on cold boiled manioc. By about
[606] 3 A.M., everyone has fallen asleep, the daughter and son-in-law staying overnight in the house. They all sleep until early the next afternoon, when they eat.

224 Hunting is the chief source of protein, and is more impor-
[144] tant to the food supply than fishing or gathering, contributing an estimated 20 per cent of the diet. A great diversity of
[222] botanical and zoological species exists in this region,[3] but this
[136] variety is typically accompanied by low density of popula-
[222] tion for any particular species. This low density sometimes
[136]

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pose a problem for Indians engaged in collecting a specific kind of wild fruit or hunting a particular species of game. This situation is aggravated for the hunter by the fact that virtually all of the Jivaro territory has been hunted efficiently for a long period of time, with the result that game is not as abundant as in regions unoccupied by the Indians. This fact was particularly driven home to my Jivaro companions and me in 1969, when, in traveling through an unhunted "no-man's-land" between the Jivaro and the Achuara along the lower Río Canguimi, which had not been exploited because of the enmity between the two groups, we encountered unprecedented quantities of monkeys and birds.

The Jivaro, under the circumstances, do not normally find collecting a very rewarding activity, and, in hunting, they cannot afford the luxury of specializing in a few large game animals, such as might be possible in some other environments. The blowgun, suitable for hunting game ranging from small birds to large monkeys, therefore, becomes a very important food-securing weapon.

Mammals especially important to subsistence include peccary, agouti, and such monkeys as howler, squirrel, capuchin, and black. Peccary and monkey are valued for both their skins and flesh, while the agouti and armadillo are utilized generally for the meat alone. Most species of birds, except for carrion-eaters, are hunted almost daily as sources of food and for their plumage. Birds most often killed include species of parrot, toucan, dove, and curassow. Both the large and small species of toucan are particularly prized for their pelts and feathers; jaguar, ocelot and other feline species are commonly hunted for their skins (see Plate 9). Rabbits and deer, although present, are never hunted for food, the former because they are "like rats," the latter for supernatural reasons (see p. 130).

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of insects and fruits, shoots and leaves constitute the main kinds of gathered foods.

Insects particularly are relished as food items, both in larval and mature forms. The rotten cores of fallen chonta palms are cut open to collect cocoons of two kinds of edible grubs (*mukintü*, *čaraŋčam*), and the ivory nut palm often yields larvae of a large moth (*wampay*). Cocoons containing grubs of the butterfly *tampirulü* are removed from hanging vines. Leaf-eating ants (*aiyaŋü*) and a kind of grasshopper (*tsampuntü*) also are collected.

The various species of palms are the most important source of wild plant food. The chonta (*Guilielma utilis*), royal, and other palms (*kiŋak*, *kuakai*, *ampakai*, *tirintü*) are chopped down with machetes to obtain their edible tips. Except for the *ampakai*, these palms (together with the ivory nut palm and *kumai*) also supply an annual harvest of large clusters of edible fruits, which are both eaten boiled and made into beer. Frequently young tender leaves are collected from other plants (*unusi*, *tučinč*, *ipü*, *wamat*), but no wild roots are dug up for food. Generally, the only tool used in all these gathering activities is the machete.

Virtually all families raise chickens, some also raise ducks, and a very few keep pigs. A household's pigs are allowed to wander relatively freely in the adjacent forest to feed. If they start rooting in the garden, a low rail fence may be built around it to keep them out. Neighbors' pigs never seem to threaten the garden, because of the long distances between houses and the small numbers of pigs kept.

Chickens, ducks, and their eggs are utilized for food, especially to feed visitors when no game is on hand. In the uncommon cases where pigs are kept, the family usually is planning a *tsantsa* feast and intends to slaughter the pigs to

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178 been made possible by the development of trade with the
184 Achuara, who are the main regional producers of blowguns
278 and curare. Formerly, blowguns and curare could only be
411 obtained in small quantities by looting Achuara houses after
438 a successful head-hunting raid.
[727]

In the case of fishing, no noticeable trends have occurred
178 except for a very minor increase in the use of hook-and-line
227 technique due to the acquisition of some steel fish hooks by
438 means of the inter-tribal trade network.

Wild food gathering has been marked by a decline in the
178 collection of the formerly important chonta palm fruit. This
• 222 decline in collection, interestingly enough, is attributed to
137 the introduction of the steel machete, whose efficiency, compared to the stone axe, made it easy for men to chop down chonta palms simply for their edible tips, thereby reducing the number of trees available as regular sources of the hanging clusters of fruit. In other words, the introduction of steel cutting tools, by contributing to the degradation of this wild food resource, decreased rather than increased food obtained from gathering.

178 Species of domesticated plants remain unchanged except
24 for two new additions, *papa china* and the onion, introduced by means of trading partners from the frontier Jivaro, who in turn had adopted them from the missionaries and Ecuadorian settlers. None of the aboriginal native crops has been abandoned within the memory of the informants.

[462] The sexual division of labor in agricultural activities is unchanged except for the relatively inconsequential harvesting of the small plantings of red pepper and sugar cane. Formerly, both sexes engaged in harvesting these, whereas now only
178 women do. The decline of male interest in harvesting sugar
278 cane seems to be due to the fact that since the adoption of
411 firearms, blowguns and poisoned darts are rarely used any
824